SP FTS AirJet™ XR

Sample Cooler for Liquid- and Solid-State NMR

Features & Benefits

- Provides sample temperature control for NMR, EPR, X-ray diffraction and many other applications
- Optional air dryer allows for use of a house compressed air supply
- Temperature controller provides precise regulation of heat input to produce a temperature stability of ± 0.5 °C
- Mechanical refrigeration eliminates need for expendable refrigerants and difficulties associated with delivering expendable refrigerant to the sample
- Temperature control range of of -90 °C to 100 °C
- Flow rates to 2 scfm (56 lpm)
- 8', 15', 20' or 35' non-magnetic delivery line lengths available
- Low flow safety buzzer
- Includes USB adapter, 2m cable and software to permit data logging and remote access

Certifications

- CE (2006/42/EC), (2006/95/EC), (006/108/EC)

Performance Specifications

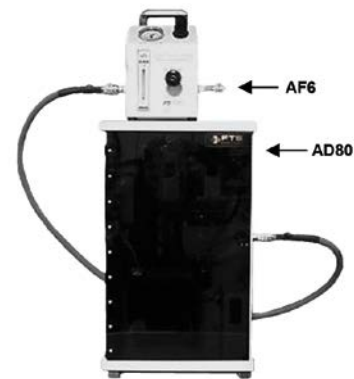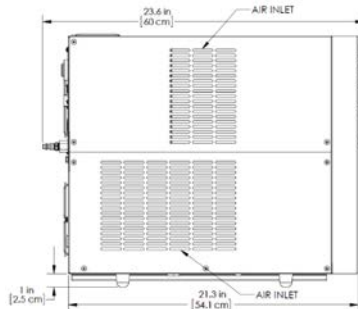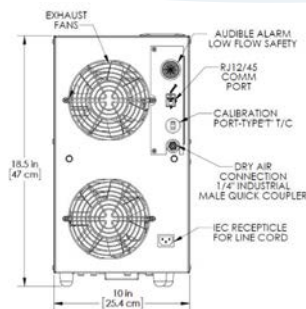| Description	XR402	XR902
Maximum Low Temperature	-40 °C	-90 °C
Temperature Control	Standard	Optional
Temperature Control Range	-40 to 100 °C	-90 to 100 °C
Temperature Control Stability	± 0.5 °C	± 0.5 °C
Temperature Indication Display[1]	0.1 °C	0.1 °C
Flow Rate Range	0.25 to 2 scfm (7 to 56 lpm)	0.25 to 2 scfm (7 to 56 lpm)
Communication Interface (Control Only)	RS485/USB (with software)	RS485/USB (with software)

Note: Performance specifications are based on SP test data from units using dry air with dew point of less than -100° and operating at an ambient room temperature of approximately 22 °C (72 °F).

Temperature Flow[2]

Description	XR402	XR902 (Control)	XR902 (No Control)
0.25 scfm (7 lpm)	-30 to 100 °C	-65 to 100 °C	-75 °C
0.50 scfm (14 lpm)	-33 to 100 °C	-80 to 100 °C	-85 °C
0.75 scfm (21 lpm)	-37 to 100 °C	-85 to 100 °C	-90 °C
1.00 scfm (28 lpm)	-40 to 100 °C	-90 to 100 °C	-90 °C
1.25 scfm (35 lpm)	-40 to 100 °C	-90 to 100 °C	-90 °C
1.50 scfm (42 lpm)	-40 to 100 °C	-90 to 100 °C	-90 °C
1.75 scfm (49 lpm)	-40 to 100 °C	-90 to 75 °C	-90 °C
2.00 scfm (56 lpm)	-40 to 75 °C	-90 to 50 °C	-90 °C

SP FTS®

SP FTS AirJet™ XR
Sample Cooler and Accessories

Air Requirements

Description	XR402	XR902
Flow	56 lpm (2 scfm)	56 lpm (2 scfm)
Minimum Pressure	45 psi	45 psi
Dew Point	< -60 °C	< -100 °C

Electrical Requirements

Description	XR402	XR902	XR902
60 Hz Option	120 V, 5 A[3]	120 V, 12 A[3]	120 V, 11 A[3]
50 Hz Option	220 V, 2 A[3]	220 V, 5 A[3]	220 V, 4 A[3]

Note: All equipment configured with the 60 Hz option is supplied with a 5-15P NEMA configuration (i.e., ⊙). All equipment configured with the 50 Hz option is supplied with a non-terminated AWG 18-3 power cord.

Dimensional Data

Description	AD80	XR402	XR902
Width	31.8 cm (15.5 in)	26.7 cm (10.5 in)	25.4 cm (10 in)
Depth	17.8 cm (7 in)	41.9 cm (16.5 in)	54.2 cm (21.3 in)
Height	53.3 cm (21 in)	23.6 cm (9.3 in)	47.9 cm (18.5 in)
Weight	14 kg (30 lbs)	23 kg (50 lbs)	32 kg (70 lbs)
Delivery Line Length[5]	—	8 ft, 15 ft, 20 ft, 35 ft	8 ft, 15 ft, 20 ft, 35 ft
Nozzle Housing (Diameter x Length)	—	6.35 x 30.5 cm (2.5 x 12 in)	6.35 x 30.5 cm (2.5 x 12 in)
Nozzle Tip (Diameter x Length)	—	0.8 x 2.54 cm (0.312 x 1 in)	0.8 x 2.54 cm (0.312 x 1 in)

Note: Dimensional drawings shown for XR902 only
[1] *Temperature Indication Display is only available on units with temperature control*
[2] *Performance parameters are based on SP test data from similar units operating at 120 V and 60 Hz in an area with an ambient temperature of 21 °C*
[3] *This is the actual, maximum continuous amperage drawn by the equipment*
[4] *The AirJet™ requires dry air or dry gas*
[5] *35 ft delivery line limits ultimate low*

Optional Accessories

Model	Description
AD80A (requires AF6)	Air dryer, 120V
AD80D (requires AF6)	Air dryer, 240V
AF6	Pressure and flow regulator
CK2	Caster kit (XR902 only)
SET1-XR	Static eliminator, 5/16" ID use with AirJet XR
XR-JCONN	Adapter, XR probe to Johnston connection

Description	Air Dryer AD80
Air Connection	6mm (1/4 inch) male, quick disconnect
Air Line	1.5m (5 ft) air line for direct connection to AirJet™ XR
Air Requirements	Flow: 2 SCFM (56LPM) Pressure: 70 psi / 100 psi (XR402 / XR902)
Electrical Requirements:	60 Hz Option: 120V, 1A • 50 Hz Option: 200V, 1A

Note: The AD80 air dryer requires the AF6 for operation

Description	Air Flow Regulator AF6
Air Inlet and Outlet Quick Connects	Mounted on rear of compact 6" x 6" x 8" cabinet for easy insertion into air flow system upstream of AD80.

Communication Kit, Solo Controller

A communication kit comes standard with the AIrjetTM XR. The kit includes a USB adapter, two meter cable and software. A PC with Windows® 10, Windows® 98, Windows® NT, Windows® XP, 32-bit Windows Vista®, or 32-bit Windows® 7 operating system is required for bridge and driver installation. The communication kit will not work with a 64-bit WIndows® operating system.

Communication Kit Features

- Permits complete control of the AirJet™ from a PC
- Allows for plug & play operation
- Allows for data logging
- Includes a 64 segment ramp soak program